SUMMARY

A general description is given of conditions in a 105 Siamese rice village, 1952-54, as they relate to food supply 26 and food habits. Activities at various seasons of the year [220] are described. The heavy work seasons occurred during transplanting and harvest. In the dry season, many ceremonials and festivals were held in which food played an important role. Such occasions provided opportunity to "make merit" and add to one's prestige as did the regular offering of food to the priests, throughout the year. The relatively large financial obligations undertaken by those sponsoring ceremonies was a major factor in the economy of the village.

105 Food was mostly home produced and an important factor 262 in the standard of living was the number of productive hands 433 available. Rice was the first essential for any meal. Home milled rice was used, even in part, only by a minority of households. Fish, fresh or preserved, was the food next in importance to rice. Use of flesh foods other than fish was probably inhibited by Buddhist tenets which prohibit the taking of life, but some poultry, oxen, and other flesh foods [235] were used. Nearly all of the families in Bang Chan raised [433] chickens, and some raised ducks, but about 3/5 of all eggs [244] produced were sold. Every family had some sort of kitchen [245] garden, including banana trees and other plants, but spices and chili were much more commonly grown than vegetables and [223] fruit. Swamp cabbage, the green leafy vegetable used most often, grew wild in the canals. A calendar of fresh foods commonly used in Bang Chan is presented.

[443] Cash expenditures for food were small. When canals were navigable, boat venders brought produce and during the busy work seasons farmers often bought fish as well as the usual foods: onions, garlic, limes, coconut, palm sugar and small amounts of vegetables.

[434] Many households increased their income by the sale of eggs, vegetables gathered from the canal and other items. [178] Culture of tilapia and mushrooms, begun during the period of study, was undertaken by a considerable number of farmers between 1953 and 1955. Both enterprises were apparently regarded primarily as a supplementary source of cash rather than as a means of improving the home food supply, and both efforts had been largely if not entirely abandoned by 1957.

105 Preparation of some typical dishes, meal service and 264 techniques of eating are described. For adults, two meals a day were usual, except during the busy work seasons when a third meal might be eaten. Menus were similar for all. Two observations from records of school children were 1) that over 90% of them ate snacks, many of which were bought from venders on the school grounds. Sweets and fruit were the

792 262 411 village offers of regular service, the holiday offerings, home invitations and sporadic gifts so that all priests had places to go, no one had much more than any other, and that the whole temple did not undergo periods of undue glut[1] or hardship.

792 796 262 About mid-July, Buddhist Lent changed the food habits somewhat. This three-month period corresponded with the height of the rainy season. Priests did not leave the temple to gather offerings on rainy mornings, but younger priests, assisted by the temple boys, cooked meals from supplies on hand. On the first day of Lent, people brought less perishable foods: green bananas, coconuts, sugar cane, pomelo, sweet potatoes, taro, onions, garlic, salt, sugar, dry salted beef paste, dried fish, canned goods, and milled rice. During Lent fresh or cooked foods were brought in, and some ladies volunteered to cook for varying periods of time. On a holiday in September, families made up such quantities of a sweet of "puffed" glutinous rice, sesame seed, and peanuts pounded and held together with sirup and sometimes covered with grated coconut that priests were tired of it and many children got diarrhea from overeating of it.

In mid-October, the Lenten restrictions ended with another holiday offering, and thereafter the priests went regularly on their appointed rounds.

796 261 On Buddhist holidays, the people did not usually eat any of the food brought to the temple, but on (3)thaauad (2)ka-(5)thin[2], an all-day festival held in October or November, after feeding the priests, the people also ate bounteously.

792 857 262 Residing at Wat Bang Chan in 1954 were 22 boys, aged 10 to 16, sent to serve the priests, get their living and attend school. Most of them were from poor or disorganized homes. They shared the food offerings from which they received three meals a day. Among the children's food records, the food listed by these boys as eaten the day before was comparatively diverse.

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792 262 737 235 1. Amounts of food given usually exceeded the actual needs of the priests and temple boys. One instance was noted in which food was sent by the priests to a needy old person nearby. Leftover rice was dried and sold for chicken feed.

114 104 2. The transcription used throughout this report is that described by Sharp et al., 1953, pp. 12-15. Numbers in parentheses represent the different tones of the syllables.

256 canal misjudged his needs for milled rice and ran out, he had
505 to mill his own paddy. Since the main canal was deepened in 1953, year-round transportation of rice by boat has been possible for many more farmers, and this may further decrease the consumption of home-milled rice.

256 Of 105 households which had and used a home rice mill,
231 99 used the polishings for feed but no family in Bang Chan
262 used them for human food (Goldsen and Ralis, 1957). One far-
433 mer, headman of a hamlet, who lived near the main canal and
235 the road to Minburi but who used home-milled rice, offered as
256 the reason that the polishings were good chicken feed, and if he took rice to Minburi to be milled, the miller would keep the polishings.

114 As reported by Janlekha (1955) consumption of milled
146 rice in 106 households amounted to about 285 kilograms per
262 capita per year or 780 grams per person per day. Such "house-
433 hold consumption" includes "losses to pests and poultry, daily gifts to priests, contributions to temples and outlays for feasts and rites in undetermined but considerable amounts" (Sharp et al., 1953, pp. 265-266).

262 Flesh Foods Other than Fish. - The people of Bang Chan
231 had a taste and appreciation for flesh food, but the production
784 and use of meat was certainly inhibited by Buddhist tenets which prohibited the taking of life.[1] Killing of poultry, fish, etc. was tolerated among the relatively young, but was considered unsuitable to the aged who should be preoccupied
[792] with living virtuously. People felt, however, that the sin of taking life was condoned if they offered part of an animal to the priests.

Since many villagers were unwilling to slaughter buffaloes even when they become aged and useless, such animals were commonly kept until they died. Animals which had died of old age or disease were not, however, regarded by Thai Buddhists in Bang Chan as unfit for human consumption. Usually they
[792] were cut up and given to the priests. When the buffalo belong-
[252] ing to one family (Household 67)[2] participating in the dietary survey died, some of the meat was used fresh for curry, much

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[443] 1. Meat such as water buffalo and pork as well as fish was sold by venders. Since meat was relatively expensive and was usually used in small amounts with other foods, it was offered for sale in chunks which no longer resembled the living animal. Seeing such small quantities spared the sensibilities of the Buddhists who were thus removed a step from the
[184] killing. Actual butchering was done by Moslems or Chinese who did not object.

[26] 2. Households were identified by numbers assigned by lot.

was given away fresh to selected kin and friends, including those who helped to butcher, and the remainder was salted and dried. Of this, 7 kg. were kept and 5 kg. sold. Moslems are forbidden to eat an animal with two or four legs which "dies," although eating dead locusts or fish is not forbidden. Some Moslems in Bang Chan reported offering dead animals to Buddhists in barter for other materials.

Oxen, a sign of prosperity, were bought as calves by the Moslems and fattened for meat, usually with a ceremony in mind. In 1955 (Goldsen and Ralis, 1957) only 5 householders in Bang Chan raised hogs, and 4 of these had 1 or 2 only. Moslems ate no pork. A permit from the district officer was necessary for slaughtering a buffalo or an ox but not for hogs. Natural deaths of such animals were supposed to be reported.

Poultry was not commonly used for food in Bang Chan. It was the poor man's "feast" food suitable for guests. One couple in the lowest income level killed one chicken or a duck once a year to provide the traditionally good meal for their cooperative harvest helpers. Others, better off, might serve chicken especially at men's dinners. Pigeons were raised for sale in the market by one Moslem family. In 1953-54, one person was trying to raise a few turkeys for sale, as word had reached Bang Chan that turkeys were in demand for foreigners' holiday dinners. By 1957 turkey-raising for cash was spreading, but some villagers objected to having them around "because they look like vultures and bring misfortune."

Various wild creatures were used for food whenever they were caught. Turtle curry was considered a great delicacy, but as turtles, which could be caught from May to February, brought a good price in Bangkok, experts usually sold their catch. Frogs and turtles were sometimes kept in a jar until needed. Eels, frogs, cobra and other snakes were used for curry. Field rats, available all year, were roasted.

Fish. - Next to rice, fish constituted the most abundant food in the diet in Bang Chan. Either fresh or preserved,[1] they were available throughout the year. Killing

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1. According to observation in 1952-54, fish caught in excess of immediate needs were preserved for later use. Serpentheads ((1)plaa (3)chauaun), which are about 7 or 8 inches long, and pilot fish ((1)plaa (2)sa-(2)lid), about 4 or 5 inches long, were commonly salted and dried. Heads and tails were removed and the fish were split open and salted overnight. The following morning the fish were washed and spread on fiber trays in the sun to dry. Some excess fish might be dried at anytime of year, but larger quantities were done during the hot, dry season. The process was usually complete within a week.

228 which the leafy vegetable (2)phag (2)ka-(2)cheed is one, and digging a deep hole at its entry. At the proper time the opening was plugged. The fish grew in the pool and were taken as needed, sometimes, for convenience, several at a time, to be kept alive in a large pot near the house. By draining the pond fish were "harvested" (p. 12). Yields varied, but villagers had the impression that they had de- 654 clined considerably over a period of years.[1] In 1952, at the suggestion of FAO, the Thai government tried to increase the supply by introducing tilapia culture. During the first three years of the experiment about one-third of the families in Bang Chan had tried to raise tilapia, but in the summer of 1957 members of the research group were told that no one had persisted (see Appendix A, p. 101).

235 Eggs. - Chickens were raised by about 90% of the families in Bang Chan, and over 70% owned 10 or more. In contrast, only 37% of the households had ducks, and only 13% had 10 or more (Goldsen and Ralis, 1957, p. 56). Ducks were regarded as trouble makers. Moreover, chickens could feed "naturally" and certainly helped themselves to paddy from the bin, whereas ducks did not eat paddy, but had to be provided with bran and broken rice.

235 Most of the eggs produced were sold. Janlekha (1955) 443 estimated the annual production of chicken eggs in Bang Chan 433 as 366,540, and that of duck eggs as 268,200 eggs. According 262 to the information which Janlekha obtained from 106 households in 1953, about 4/5 of the chicken eggs were sold as a secondary source of farm income whereas more than 3/4 of the duck eggs were home consumed. Slightly over 2/5 of all eggs produced in the village were consumed there. On a per capita basis, the average annual consumption of 708 eggs for an average family size of 5.7 persons (Janlekha, 1955) amounted to a little over 1/3 of an egg per day. Home consumption of eggs might be less in households in which enough chickens were raised to make regular sale of eggs possible. Thus in 5 of the 31 households studied by Sharp et al. (1953, p. 197) all hen's eggs produced were consumed at home.[2] For these families, an average of 452 eggs per family per year or about 1-1/4 egg per family per day, were thus available. Home consumption in the 26 families which sold eggs amounted to an average of 215 per year or about 0.6 egg per family per day. One informant commented that a rich man could eat an egg every day, but she could not afford to do so. She said she sold eggs, when she had them, and bought foods to eat with rice.

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1. Sharp et al., 1953, pp. 191-192.

2. This probably means that eggs were not sold in quantity, not that none were used in barter (cf p. 5); thus the number of eggs available may be overestimated.

fishing and selling vegetables, they managed to obtain a fair diet. The father's skill as a masseur was valued especially at periods of heavy farm work, after childbirth, and by the cooks at a ceremonial feast. This brought in from 2 to 12 baht per week.

In Group A, Families 67 and 103 were at the most difficult period of life, with young, dependent children, and housing, land and equipment to be acquired. By great industry, including egg production from a flock of 60 chickens, and by severe "belt-tightening," Household 103 was lifting itself into a propertied position. The parents in Household 67 were shy. One or the other of the two older children often stayed home from school to look after the baby, so that both parents could work. Husband and wife in Household 12 were both very shy, the only ones in the survey group who were at all reluctant to participate. They seemed ashamed of limited food. The wife was frequently ill. In Household 222, the 14-year old daughter often gathered and sold vegetables at Minburi before school in the morning. She might have full charge of the younger children for days at a time. A daughter who worked as a servant in Bangkok contributed 50 baht per month to this household. In Household 215, the activities of the wife as medium were predominant. Pay included food, often cooked, and the free use of 3½ rai of land, as well as cash. Maintenance of a son in school in Bangkok cost about 1000 baht per year plus 60 tang of rice. In Household 2, the elderly wife's services as "boss-buyer and cook" at ceremonials, and as marriage go-between did not bring in cash, but gifts, clothing and much participation in feasts.

All families in the survey group were Thai Buddhists, and 6 of them offered food to priests more or less regularly. On 17 of the 24 survey days when the observer visited these households, food was offered. Two of the 5 families that did not customarily give food to priests, did so on one and two survey days, respectively. In one case food was offered to a son who had been recently ordained. Rice was always included in the food offered, and in 3 of the 20 instances observed rice only was given. The weight of cooked rice given by one family in one day ranged from 185 to 1210 grams, with an average of about 600 grams. In 16 instances, some cooked food such as fish or vegetable curry was given with the rice; in one instance fresh pineapple was given.

Cash Expenditures for Food. - Mean total, and per capita daily cash expenditures for food for survey days, are shown, by household in Table 3. (See Table 2, p. 23 for division of food expenditures for Groups A,B) Although cash expenditures for food varied considerably, the amounts in all cases were small, and approximated figures obtained by Janlekha (1955) for 106 households. Larger consumption of animal products, which were the most expensive items purchased,

235 Eggs and poultry. - Every household which took part in the survey raised chickens, and 3 of the 11 households had ducks also. In both groups of families, most of the eggs produced were sold. Home consumption of eggs on survey days was small.

228 Fish. - Each family studied had a fish pool. One family only, Household 25 in Group B raised tilapia. They began tilapia culture during the third round of the study, too late to ascertain how this might affect fish consumption in the family.

251 Preservation of Foods at Home. - Home food preservation was practiced to a very limited extent only, fish products being the principal ones produced.

Dried fish. - Families in both groups salted and dried fish throughout the year whenever they were available in excess of immediate needs.

Fermented fish. - In 10 of the 11 households, fermented fish was prepared. The 6 families in Group A had prepared a total of 30 kg., and 4 of the 5 families in Group B, a total of 29 kg. The largest amount prepared in one household, for one year was 10 kg.

Shrimp paste. - Because shrimp were caught in insufficient quantity, shrimp paste was prepared by only 6 of the 11 families. Four families in Group A prepared a total of 26 kg., and 2 families in Group B prepared a total of 7 kg. These amounts were insufficient for their needs.

Fishsoy. - One family only, in Group A, prepared fishsoy. All others in both groups purchased this product.

Buffalo meat. - During the survey year, the buffalo belonging to one family died. Some of the meat was used fresh for curry, and the remainder was salted, dried and sold.

Comparison of Caloric and Nutrient Intakes of the Two Groups With Each Other and With the Estimated Allowances.

128 In Table 11, the estimated calories and nutrients avail-
146 able to the two groups of families, are shown together with the estimated allowances.

146 On the average, the number of calories, and amounts of protein, iron, niacin and ascorbic acid in the diets of persons in Group B, the apparently better nourished group, approximated or exceeded the conservative allowances. For Group A, this was true for niacin and ascorbic acid only, the calories being 11%, protein 15% and iron 21% below the allowances.

7. I understand that, since the last war, there have been, around here, some introductions of new things in the field of rice farming, other farming, gardening, and fishing in order to raise production. What are these various new things? (177* 178* 125 [241] 402 243 228 244 235 231)

1.	Fertiliser	9
2.	Small engine	4
3.	New rice seeds	3
4.	Tilapia	98
5.	Other fish, specified	13
6.	Fish, unspecified	80
7.	Mushrooms	45
8.	Poultry	179
9.	Pigs	21
X.	Other, specify	68
0.	Unascertainable	45

8. Here, some farmers get a lot more rice from one rai of land than others get. Generally speaking, what are the various reasons why this is so? [243] [433]

1.	Fertiliser	59
2.	Skill of the farmer	63
3.	Quality of the soil	65
4.	Irrigation facilities	125
5.	Type of seed	17
6.	Other reason, specify	53

9.a. When was it more profitable for you to grow rice, this year just finished, or two or three years ago? [243] [434]

1.	This past year	131
2.	No difference	57
3.	2 or 3 years ago	62
4.	Unascertainable	25
—	Does not apply	58

b. If 2-3 years ago: If this is so, then it has become less profitable to grow rice. Such being the case, have you done anything to improve the income of your family?

7.	Yes	36
8.	No	25
9.	Unascertainable	1

c. If yes: what various things have you done?

5.	Nothing	4
6.	Mushrooms	6
7.	Poultry	8
8.	Fish (Incl. Tilapia)	5
9.	Fertiliser	
X.	Other, specify _____	25
Y.	Unascertainable	2

10.a. Do you own a small engine motor, or not? [402]

1.	Yes	70
2.	No	259
—	No Answer	4

125
[434]

16.a. ASK ONLY FARMERS: This year just now beginning, will you do anything for increasing your income, outside of rice farming?

3.	Does not apply	13
4.	Yes	162
5.	No	107
6.	Unascertainable	11

[224]

b. IF YES: What various things will you do?

0.	Nothing	3
1.	Mushrooms	42
2.	Poultry	51
3.	Fish (Incl. tilapia)	10
4.	Fertiliser	2
5.	Other, specify_____	84
6.	Unascertainable	6

[235]
[228]
[241]

17. ASK ONLY FARMERS:

a. Last time you planted rice, how many rai of rice did you plant?

[243]
[433]

1.	4 rai or less	14
2.	5 to 9 rai	25
3.	10 to 19 rai	49
4.	20 to 29 rai	65
5.	30 to 39 rai	53
6.	40 to 49 rai	32
7.	50 to 59 rai	19
8.	60 to 69 rai	14
9.	70 to 79 rai	2
X.	90 rai or more	—
0.	Unascertainable	20

b. And what was the total yield?

1.	120 tang or less	15
2.	121 to 300 tang	28
3.	301 to 600 tang	59
4.	601 to 900 tang	59
5.	901 to 1200 tang	56
6.	1201 to 1500 tang	25
7.	1501 to 1800 tang	10
8.	1801 to 2100 tang	10
9.	2101 to 2700 tang	7
X.	2701 or more tang	3
0.	Unascertainable	21

c. How about the year before--how many rai did you plant?

1.	4 rai or less	16
2.	5 to 9 rai	19
3.	10 to 19 rai	51
4.	20 to 29 rai	67
5.	30 to 39 rai	53
6.	40 to 49 rai	26
7.	50 to 59 rai	20
8.	60 to 69 rai	13
9.	70 to 89 rai	5
X.	90 rai or more	—
0.	Unascertainable	23

125
[412]
50.d. (In your household) is there a pair of scissors of any kind or not?

7.	Yes, scissors	219
8.	No	114

[207]
e. (In your household) is there a radio or not?

9.	Yes, radio	47
0.	No	286

[402]
f. (In your household) is there a winnowing machine, or not?

X.	Yes, winnowing machine	102
Y.	No	231

[243]
[402]
g. (In your household) is there a windmill, or not?

1.	Yes, windmill	161
2.	No	172

[805]
[405]
51. Do you have a wrist watch, or not?

3.	Yes	79
4.	No	252
—	No Answer	2

[231]
a. Here in your household, how many buffaloes do you own?

5.	None	81
6.	One	27
7.	Two	67
8.	Three	61
9.	Four or more	97

b. (Here in your household) how many pigs do you have?

0.	None	321
1.	One	2
2.	Two	2
3.	3 or more	1
—	No Answer	7

[235]
c. (Here in your household) how many chickens do you have?

4.	None	35
5.	1 to 2	7
6.	3 to 4	17
7.	5 to 9	31
8.	10 or more	243

d. (Here in your household) how many ducks do you have?

0.	None	208
1.	1 to 2	9
2.	3 to 4	16
3.	5 to 9	58
4.	10 or more	42

231 ones, but limited grazing areas and the burden of work imposed on them have been a factor militating against their reproducing themselves. During the first half of the rice year (April-September) buffaloes feed on green grasses, direct in the field which has not yet been plowed or cut for them by the farmers. During the second half of the year when the supply of green grasses is reduced to the minimum, they feed on straw which normally lasts until new grasses become available with the coming of rains. Buffaloes are used only for farm work and never for milking purposes.

• 235 Chickens: Practically every family in Bangchan raises chickens which are second only to rice as a source of cash income. Many breeds are found in the village. Most common are the native mixed breed and the imported Rhode Island Red. These chickens are raised "naturally" -- although the farmers feed them with paddy once in a while, most of the time they help themselves to paddy in the mat bins and in addition scavenge for a part of their feed. The size of the flock averaged 8.6 laying hens per family according to the 1949 survey. The same survey showed an average rate of production of 143 eggs per laying hen per year.

Ducks: In 1949, only one-half of Bangchan residents raised ducks but the size of the flocks was slightly larger than that of chickens, averaging 11.7 laying ducks per family raising them. The annual rate of production, too,

236 was slightly higher than that of chickens, averaging 155 eggs per laying duck.

178 231 Hogs: In 1949, two families were raising hogs which according to our observation did not seem to be well fed. When we returned to the village in 1952, not a single hog remained in Bangchan.

Fish

262 443 434 After rice, fish (and other marine animals) are by far the most important ingredient in the diet of Bangchan. More fish are bought from the outside than the very small amount that is exported from the village mainly by one or two very poor families who have availed themselves of this means of augmenting their income.

221 226 The villagers' annual cycle for fish-taking varies somewhat with the particular method used, and with the annual rice and ceremonial cycles: yet the maturation cycle of the principal types of fish is also a factor, and one which tends to give an overall orderliness to the annual cycle for fish in general. There is no time in the year when at least some fish are not available, nor is there any time in the year, even the busiest, when the family does not want fresh fish for its menu. For this reason, there is fishing the year round, at least in the form of the housewives simply setting nets in the canal and then tending them according to some schedule or whenever the noise of caught fish sloshing about in the water is heard. When a lull from the pressure of

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

243 buffaloes heretofore undreamt of and will have to bear
231 the consequent burden of increased cost of producing rice.
311

Some description of the homelots which constitute
311 almost five per cent of the land area of Bangchan has already
351 been given in the section on vegetation, Chapter II. From
231 the standpoint of land utilization, functions of the homelot
235 other than providing standing room for the living quarters
244 may be mentioned as follows:
245
226

1. It provides space for threshing and for storage of rice and farm equipment including buffaloes.
2. It provides room for chicken or duck raising.
3. It provides land for a kitchen garden, and for fruit and vegetable growing.
4. It provides space for fish trapping by the draining method.

To serve these functions, homelots in any rice growing village, where the fields are submerged under water during the entire life of the rice plant, must be high above water level during the flood season, must be well drained, and must have pools with ample shade.

243 Rice land in its natural state does not meet these
311 requirements for a homelot. In the first place its level is too low. Second, the impervious layer of clay characteristic of rice land does not permit soil drainage. To make a homelot out of rice land, it is necessary that the prospective site be mounded up to a level two or three feet higher than the level of the surrounding fields. The hole from which

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 15

VILLAGE PADDY CONSUMPTION
Bangchan, Thailand, 1953

Item	Units of Consumption	Rate	Total Consumption
		tang	tang
Food	1,372 man equivalent	38.3	52,548
Feed	5,066 chicken equiv.	4.0	20,264
Seeds	7,682 rai equivalent	1.0	7,682
Total		--	80,494

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

*243 433 In Table 15, units of consumption of paddy are arrived at by the following procedure:

*243 433 146 1. Food. Children age 14 and under are considered to have one-half of the rate of consumption of adults and the old. Thus, 644 children in Table 2 comprise 322 man equivalent units of consumption. When 1,050 people over 14 years of age, each having one man equivalent unit of consumption, are added, a total of 1,372 units is obtained.

The rate of consumption of 38.3 tang per man equivalent was obtained from our consumption study of 106 families in 1953.

*243 433 = 235 2. Feed. Due to the lack of adequate data for 1953, figures obtained by the poultry survey conducted in 1949 were used in the calculation for feed. Items in that survey include roosters, hens, chicks, and ducks. Information on poultry feed consumption was obtained from Luang Suwan, the poultry expert of Kasetsat University, Bangkok, who gave the following figures: roosters, hens and ducks, naturally raised, consume four tang of paddy per head per year; and a chick's paddy consumption, negligible at the beginning but gradually increasing with its age, is about three tang per year. Most of these chicks were disposed of at the age of seven months when each had consumed about one tang. One chicken equivalent is therefore assigned to each head of roosters, hens and ducks, and one-fourth chicken equivalent to each chick. On the basis of a stock of 17 chicken equivalents per family, which was found to be the case in 1949,

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

a total of 5,066 chicken equivalents was estimated for 1953.

3. Seeds. Since broadcast and transplanted rice require different amounts of seeds per rai, the total rice area planted to broadcast and transplanted rice must first be reduced into comparable figures -- the rai equivalent, or an area of one raidfor transplanted rice and two rai for broadcast rice. We do not know the actual proportion of broadcast area to transplanted area in 1953, but the proportion figure of 497 1/4 to 3,030 or roughly one to six for 1949 may be assumed.[5] Thus, the total area of 6,722 rai for both broadcast and transplant rice is changed into 7,682 rai equivalent for the purpose of estimating the amount of seeds required. It was found in 1949 that one tang of seed was used for each rai equivalent of rice field. This figure is used in the present calculation.

Table 16 shows that an annual surplus of 113,100 tang of paddy, or about 1,244 tons, was estimated for 1953 on the basis of past performance. This is about 58 per cent of the crop.

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5. Sharp et al., op. cit., pp. 145-46.

TABLE 16

ESTIMATED VILLAGE PADDY SURPLUS
Bangchan, Thailand, 1953

Paddy Production		193,594 tang
Paddy Consumption		
As food	52,548	
As feed	20,264	
As seeds	7,682	
Sub-total		80,494 tang
Paddy Surplus		113,100 tang

Other Food Production

235 433 Other food products which are produced in a considerable amount in Bangchan include chicken eggs, duck eggs, and fish. To a lesser extent, fruit and vegetables are also produced locally.

Practically every family in Bangchan raises chickens, and half raise ducks. In April, 1949, the author conducted a poultry survey covering 46 families whose homes were on the banks of Bangchan Canals. Of these, 45 families were found to be raising chickens and 23 families raising ducks.

Of 45 families raising chickens, 38 families from which data were available reported rates of egg production showing that for these families 53,750 eggs were produced annually from 376 laying hens, averaging 143 eggs per hen. [146] [438] Of 31 families who gave information about sales, five consumed all 2,260 chicken eggs produced; the other 26 families sold 31,040 eggs and consumed 5,590. The proportion of consumption to sale was thus 7,850 to 31,040 or approximately one to four.

There were 393 laying hens in the yards of 45 families, averaging 8.6 hens per family. Chicken egg production [434] was estimated at 1,230 per family. Assuming that four-fifths of these were sold at three for one baht, which was the local price in 1949, average cash income for these families from sale of chicken eggs was estimated at 326 baht annually. [435] With a higher price in 1953 of fifty satang a piece, the estimated income from sale of chicken eggs rose to 492 baht per family.

235 433 434 Of the 46 families covered by the survey, 23 or one-half raised ducks with an average annual production of 155 eggs per duck, and an average of 11.7 ducks per family raising them. Egg production for each of these families thus averaged about 1,200 per year. Of these, 1,350 were consumed by the family and 450 sold at the same price as chicken eggs. It was estimated, then, that from duck eggs alone, the average cash income in 1949 was about 150 baht per family raising ducks.

226 262 413 [434] After rice, fish were by far the most important ingredient in the diet of Bangchan. In contrast to poultry, however, fish did not constitute a source of cash income of the villagers. As a matter of fact, more fish were bought from the outside than the negligible amount that was exported from the village mainly by one or two very poor families who had availed themselves of this means of augmenting [435] their income. From our consumption study of 106 families in 1953, it was found that of an aggregate amount of 17,786 kilograms consumed by these families in the previous year 16,027 kilograms were caught by the families while 1,759 kilograms were bought at five baht per kilogram. The rate of fish production may thus be estimated at 151 kilograms annually per family, or 44,998 kilograms for the entire village.

262 244 433 The same consumption study shows that the 106 families consumed in 1953 a total of 16,402 kilograms of vegetables all of which were produced or acquired by the families.

243 requires much additional hand labor and reduces the possibil-
242 ities for mechanization to a minimum. On the other hand, the more labor intensive transplanting method would seem to be more suitable to a population pressure area like Thailand if it really gives as relatively higher a yield as it is claimed to give.

Farm equipment

243 In Thai agriculture, it is very difficult to separate
351 the farm from the home. In the chapter on the community it
235 has already been indicated that the home lot not only is the
244 living place for the farm family but also provides space for
245 threshing and for storage of farm equipment, room for chicken
226 raising, land for kitchen garden and for fruit and vegetable growing, and space for fish trapping by the draining method.
243 In other words, all the material components of the farm, except
351 the rice fields, are located or stored on the home lot. Here,
422 items that are uniformly or frequently found include:

A. Household equipment

1. Buildings
2. Furniture
3. Bedding facilities
4. Kitchen accessories
5. Storing facilities
6. Lamps of various sizes
7. Ritual accessories

B. Farm equipment

1. Farm building: equipment and buffalo shed.
2. Implement: plow, harrow, yoke, roller, shovel, spade, hoe, weeding knife, noria, sickle, pitch-fork, rake, broom, winnowing machine, wooden winnowing spitula, basket, mat bin, box bin, home-mill.

243 433 44 plan of production. If a crop is to be produced for market in Bangchan, in all probability it must be rice. Since crop rotation is not practiced, there is no need for decision making as to the kinds of crops which are to be grown other than rice. 235 The operator may have to decide how many chickens he should keep, but he normally settles on a flock of ten to fifteen, for it would be too much a burden to keep a larger flock and fewer heads of poultry would not be worth the time. 243 433 The production function, or the choice of the best factor combination, also does not call for any serious consideration. For it has been observed that at the present stage of technological development of rice production in Thailand or even in the whole region of Southeast Asia the marginal product of labor has already approached zero. In other words, more labor applied to the same area under the same method of planting would not materially increase the crop harvested. It has been claimed, though, that a larger crop may be expected from the same parcel planted to broadcast rice by changing the planting method to the more labor intensive transplanting system. This claim has never been substantiated, however, by any systematic comparative study. Besides, the transplanting method is so universally adopted in Bangchan that it can almost be taken for granted to be the one in use by any rice farmer. Moreover, it was mentioned earlier that the planting method is not optional with the farmer but is governed by topography, expected condition of water supply, and availability of labor.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

[243] [434] [433] income and operator's labor earnings lies in the value of farm produce consumed by the family. Earlier, five kinds of produce were listed -- rice, fish, eggs, fruit and vege-
[235] tables. For technical reasons, we consider only rice and eggs as products of the farm, rice being the primary crop
[226] and eggs the secondary crop. Fish is not considered a farm product because Bangchan villagers fish for consumption, not for sale. Besides, fishing is done by every resident of the village, farmers and non-farmers alike. It is thus
[244] more of a way of life than an economic enterprise. The same
[245] is true for fruit and vegetable growing which is done in a very small scale.

If we agree on considering only rice and eggs as the products of the farm, it is not difficult to estimate the amount and value of farm produce consumed by the family for Bangchan operators can readily give a rather accurate information on their rates of consumption of these two products. Thus, under Bangchan condition the figure for operator's earnings is not as difficult to obtain as it appears to be the case among most American farms. The frequency distribution of operator's labor earnings of our 104 sample-farms is given in Table 48. It is seen that only 17 farms produced negative remuneration for the operator computed by this method as against 47 farms by the labor income method. As Professor Warren has said, of these two, labor earnings is a better
[171] measure of profits. It is especially so in Bangchan and perhaps in other agricultural regions in Southeast Asia

[TEXT CONTINUED ON PAGE 306]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

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[231]
[235]

The only livestock kept on rice farms other than buffalo, which were included under consideration of farm equipment, are chickens and ducks, which are raised "naturally." It was earlier mentioned that the size of the flock was more or less constant. Livestock, therefore, did not figure in significant inventory changes, and can also be left out.

*[243]

The only item of supplies on rice farms is paddy stock. This is used up and sold out each year. For more or less the same size of farm, and spreading over a series of five years, a difference in the average amount of paddy stock at about the same time of the year in 1948 and in 1953 would not figure significantly in inventory change.

It was also already mentioned that rice farmers did not want to keep cash at their homes for fear of robbery, and that any person receiving a large amount of cash quickly passed the money on to others. We can therefore assume that the amount of cash on hand at the same time of the year does not vary much. Cash, then, may also be left out of consideration.

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432
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Of the items of assets enumerated above, there are now to be considered only land, household equipment, gold and accounts receivable (payable). In all purchases of land, gold, and household equipment, only the cash paid was recorded and considered as assets accumulated. For example, when an operator purchased a parcel of land at 7,000 baht and paid the down payment of 1,000 baht, only the 1,000 baht

7. Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

243 the rice enterprise, cannot be devoted to gainful utiliza-
221 tion of labor because: (a) there is not enough space in
434 the homelot, the only place above water; (b) poultry is not a competing crop as long as it is raised naturally in limited number. It becomes a competing crop when it is raised commercially. [235] Commercial raising of poultry in Bangchan is handicapped by locational reasons (far from market and far from sources of feeds other than paddy). It is further handicapped by a higher chance of contamination which is true in such a geographical condition as prevailing in Bangchan; (c) another factor limiting an opportunity for growing a secondary crop during this period is that cash is most scarce in this time of the year and interest rate is highest. Any cash outlay for investment is thus discouraged. Farmers who have any cash at all will do much better by straight lending, or disguised lending in the form of petty trade on credit putting a high premium on credit purchases of 50 per cent extra on articles payable in two or three months; and (d) opportunity for wage earnings is also limited during this period because farmers do not need any help at this time of the year, and because successive rains prevent extensive public work and large scale construction.

It cannot be said, however, that there is no possible way for farmers to be gainfully employed during this period of inundation. Researches along this line are needed, ones that should take into consideration details of climatic, technical, economic, and social conditions of the village.